

Alice

Alice Overview

Volunteer monitoring began at Lake Alice in 2000 and continued through 2004. The lake is relatively low in phytoplankton productivity (on the threshold between oligotrophy and mesotrophy) with very good water quality.

Lake Alice has a public access boat ramp, and aquatic plants growing around the lake should be tracked to catch early infestations of Eurasian milfoil, Brazilian elodea or other noxious aquatic weeds.

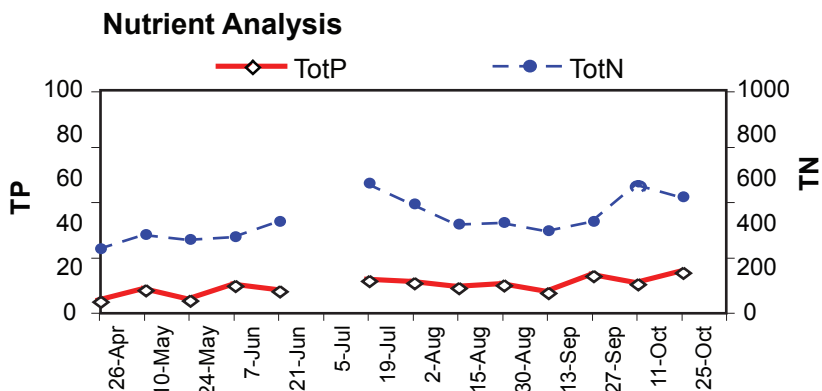
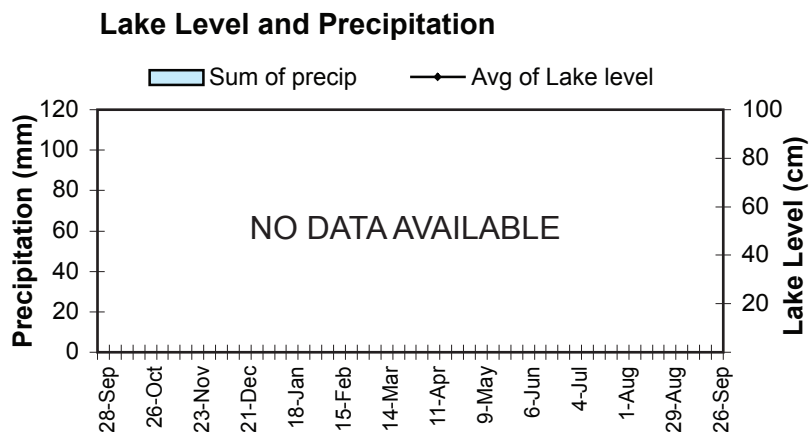
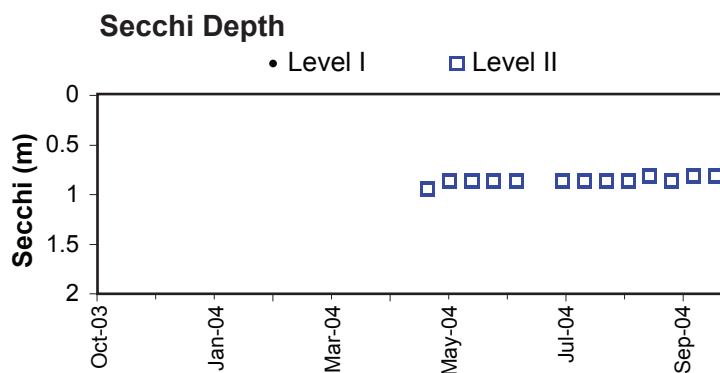
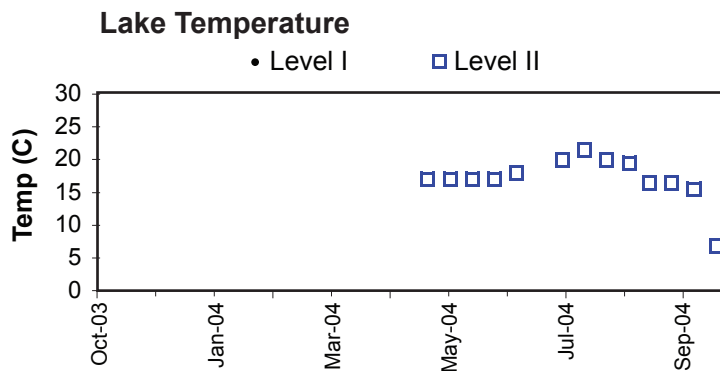
Physical parameters

Secchi transparency was relatively stable from May through October, varying from 3.3 to 3.8 m, averaging 3.5, which was in the mid range for the small lakes monitored in 2004. Surface temperature reached a maximum of 21.5 deg C which was among the lowest maximum temperature recorded for the group.

There were no lake level or precipitation records for the year.

Nutrient Analysis and TSI Ratings

Total phosphorus and total nitrogen remained in fairly constant proportion to each other through the sampling season, with increases in nitrogen in July and October. The N:P ratio ranged from 24 to 57, averaging 38, which is generally poor for growth of nuisance bluegreen algae.



Data from the profile events suggest that thermal stratification did not persist through summer, and phosphorus released from sediments did not build up in the deeper water. Chlorophyll data indicated that algae were approximately equal throughout the water column.

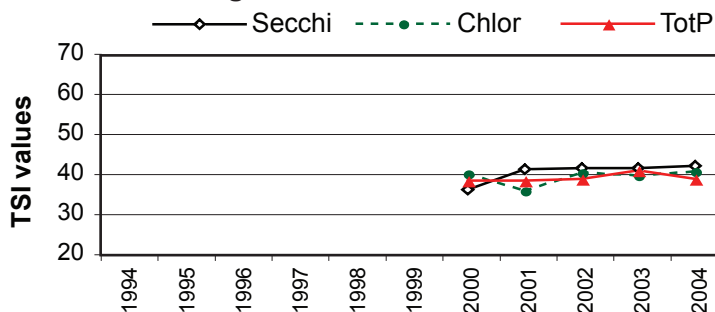
TSI values in 2004 were on the threshold between the oligotrophic and mesotrophic categories, similar to past years. All three values were close to each other.

Chlorophyll and Algae

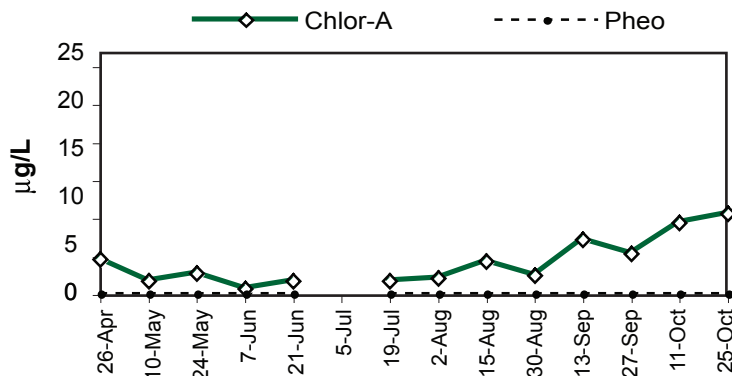
Chlorophyll concentrations at 1 m remained relatively low through the summer, with values rising in fall. The dominant algae in the fall were from the chrysophyte genus *Dinobryon*, along with several chlorophyte species. Other important algae included an unidentified chrysophyte and the bluegreen colony *Anacystis* sp. The bluegreen *Anabaena*, which can make nuisance or toxic blooms, was present throughout the season but never abundant.

Date	Secchi	depth-m	degC	Chlor-A	TP µg/L	TN µg/L
5/24/04	3.5	1	17.0	2.08	5.7	323
		8	12.0	5.89	9.3	299
8/31/04	3.5	1	19.5	1.90	12.6	397
		8	18.0	1.80	11.1	401

TSI Ratings



Chlorophyll a Concentrations (µg/L)



Common Algae

	Group
unidentified species	Chrysophyta
<i>Dinobryon</i> sp	Chrysophyta
unidentified green colonies	Chlorophyta

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2004 Level I Data not available

2004 Level II Data

Date (2004)	Temp (°C)	Secchi (m)	Chl-a (µg/l)	TP (µg/l)	TN (µg/l)	Algae Obsv.	N:P	Calculated TSI		
								Secc	chl-a	TP
26-Apr	17.0	3.8	3.59	5.25	281	3	54	40.7	43.1	28.1
10-May	17.0	3.5	1.30	10.3	343	1	33	41.9	33.1	37.8
24-May	17.0	3.5	2.08	5.7	323	1	57	41.9	37.8	29.3
7-Jun	17.0	3.5	0.50	12.2	335	2	27	41.9	23.8	40.2
21-Jun	18.0	3.5	1.30	9.8	402	1	41	41.9	33.1	37.1
5-Jul										
19-Jul	20.0	3.5	1.30	14.6	576	1	39	41.9	33.1	42.8
2-Aug	21.5	3.5	1.60	13.6	482	1	35	41.9	35.2	41.8
15-Aug	20.0	3.5	3.36	11.4	390	1	34	41.9	42.5	39.3
30-Aug	19.5	3.5	1.90	12.6	397	1	32	41.9	36.9	40.7
13-Sep	16.5	3.3	5.61	9.2	361	1	39	42.8	47.5	36.2
27-Sep	16.5	3.5	4.17	16.8	404	1	24	41.9	44.6	44.9
11-Oct	15.5	3.3	7.37	13.1	570	1	44	42.8	50.2	41.3
25-Oct	7.0	3.3	8.33	18.2	514	1	28	42.8	51.4	46.0
	Temp (°C)	Secchi (m)	Chl-a (µg/l)	TP (µg/l)	TN (µg/l)	Algae	N:P	Calculated TSI		
								Secc	chl-a	TP
Mean	17.1	3.5	3.3	11.8	413.7	1.2	38	42.0	39.4	38.9
Median	17.0	3.5	2.1	12.2	397.0	1	35	41.9	37.8	40.2
Min	7.0	3.3	0.5	5.3	281.0	1	24	40.7	23.8	28.1
Max	21.5	3.8	8.3	18.2	576.0	3	57	42.8	51.4	46.0
Count	13	13	13	13	13	13	13	13	13	13

TSI Average = 40.1